



New Jersey Department of Health and Senior Services

HAZARDOUS SUBSTANCE FACT SHEET

DESCRIPTION OF A HAZARDOUS SUBSTANCE FACT SHEET

Common Name: The top line contains the common chemical name for the hazardous substance. This is not a trade name or product name. A hazardous substance is a chemical that can be dangerous to your health or a physical hazard such as a flammable or reactive substance.

CAS Number: The Chemical Abstracts Service (CAS) of the American Chemical Society assigns a unique number to every chemical.

DOT Number: This four-digit number is assigned to a substance by the United States Department of Transportation (DOT). United Nations and North American DOT classification systems are designated by the symbols UN and NA.

RTK Substance Number: A number assigned by the New Jersey Department of Health and Senior Services to this substance.

Date: Date of last preparation of the fact sheet.

Revision: Date of revision of the fact sheet.

HAZARD SUMMARY:

☠ This summary describes the possible routes of entry of the chemical into the body and the major health effects that may result from exposure. Hazardous Substance Fact Sheets are primarily prepared for workers who handle a specific substance. Emergency responders, health care providers, and community residents will also find the information helpful.

☠ A substance can be dangerous to a person's health depending on the length of time of exposure, the amount of chemical to which the person is exposed, the way the chemical enters the body (through the skin, by breathing it in, or by accidentally getting it into the mouth), and how destructive to human tissue it is.

☠ Hazardous chemicals that are pure substances may have different health effects than the same substance

when present in a mixture. A chemical's concentration and the presence of other substances (i.e., water, solvents) in a mixture should be considered when evaluating the hazards of the mixture.

☠ A manufacturer's Material Safety Data Sheet may give helpful information on the hazardous substances contained in a mixture and the health hazards of the mixture. Hazardous Substance Fact Sheets are written only for pure substances.

☠ Substances on the Special Health Hazard Substance List have the hazard(s) noted in capital letters. This means the substance is a carcinogen, mutagen, teratogen or corrosive, or is highly flammable or reactive.

IDENTIFICATION:

The physical characteristics of the substance, i.e., gas, solid, color, or odor, are listed along with its major uses.

REASON FOR CITATION:

This section describes why this chemical is on the New Jersey Right to Know Hazardous Substance List by listing those agencies and organizations that consider the chemical hazardous, and whether it is on the Special Health Hazard Substance List.

HOW TO DETERMINE IF YOU ARE BEING EXPOSED:

Workplaces can be monitored to evaluate a person's exposure to a chemical. Under federal and state laws workers have a legal right to obtain copies of these sampling results. If applicable, the odor threshold for the chemical will be given. This threshold may be useful as a warning of exposure, but the absence of odor does not mean that you are not being exposed.

WORKPLACE EXPOSURE LIMITS:

When applicable, this section includes legally enforceable airborne Permissible Exposure Limits (from OSHA), recommended airborne exposure limits (from NIOSH or ACGIH), and additional warnings when the chemical is a Special Health Hazard Substance.

WAYS OF REDUCING EXPOSURE:

This section recommends general workplace practices and good hygiene techniques to reduce exposure to the hazardous substance.

HEALTH HAZARD INFORMATION:

This section contains a description of the acute (immediate) and chronic (long term) health effects of the chemical including whether it causes cancer or birth defects. Health effects will depend on the length of time someone has been exposed and the quantity of the chemical present during exposure. After exposure, some people might not feel sick at all, some will have a few symptoms, and others will have all the symptoms. Additional symptoms may also be present if the person has been exposed to other substances. Children, the elderly, smokers, individuals with allergies, and those suffering from chronic illnesses can be more susceptible to the health effects described.

Acute Health Effects:

Acute health effects are short term health effects which occur immediately or shortly after exposure to the substance and in some cases could cause permanent injury.

Chronic Health Effects:

Chronic or long-term health effects are delayed responses from exposure to the substance. Adverse health effects may not occur for many years.

MEDICAL:

This section provides recommendations on medical testing and evaluation for health care providers. These tests are only suggestions for medical professionals. An individual review of the patient and the exposure may indicate that no testing or no additional testing is needed. The consequences of mixing the exposure to this substance with that of other hazardous substances, or with conditions which may aggravate the initial exposure to the substance, are also included when applicable.

WORKPLACE CONTROLS AND PRACTICES:

When a less toxic substance cannot be substituted, engineering controls are the most effective way of reducing exposure to a hazardous substance. Good work practices are recommended in this section to reduce exposure to the substance.

PERSONAL PROTECTIVE EQUIPMENT:

Recommendations for appropriate protective gloves, eye protection and respiratory protection equipment should be followed carefully. Respirators should only be used if there is a written respiratory protection program.

HANDLING AND STORAGE:

(May also be found on this page)

QUESTIONS AND ANSWERS:

This section addresses commonly asked questions about exposure to hazardous substances.

OCCUPATIONAL HEALTH SERVICE:

This section lists the resources provided by the Occupational Health Service in the New Jersey Department of Health and Senior Services:

Industrial Hygiene Information
Medical Evaluation
Public Presentations
Right to Know Information

Public Presentations

Presentations and educational programs on occupational health or the Right to Know Act can be organized for labor unions, trade associations and other groups.

DEFINITIONS:

Technical terms and acronyms used in this Hazardous Substance Fact Sheet are defined to clarify the information on the fact sheet.

ACGIH is the American Conference of Governmental Industrial Hygienists. It recommends upper limits (called TLVs) for exposure to workplace chemicals.

A **carcinogen** is a substance that causes cancer.

The **CAS number** is assigned by the Chemical Abstracts Service to identify a specific chemical.

A **combustible** substance is a solid, liquid or gas that will burn.

A **corrosive** substance is a gas, liquid or solid that causes irreversible damage to human tissue or containers.

DEP is the New Jersey Department of Environmental Protection.

DOT is the Department of Transportation, the federal agency that regulates the transportation of chemicals.

EPA is the Environmental Protection Agency, the federal agency responsible for regulating environmental hazards.

A **fetus** is an unborn human or animal.

A **flammable** substance is a solid, liquid, vapor or gas that will ignite easily and burn rapidly.

The **flash point** is the temperature at which a liquid or solid gives off vapor that can form a flammable mixture with air.

HHAG is the Human Health Assessment Group of the federal EPA.

IARC is the International Agency for Research on Cancer, a scientific group that classifies chemicals according to their cancer-causing potential.

A **miscible** substance is a liquid or gas that will evenly dissolve in another.

mg/m³ means milligrams of a chemical in a cubic meter of air. It is a measure of concentration (weight/volume).

MSHA is the Mine Safety and Health Administration, the federal agency that regulates mining. It also evaluates and approves respirators.

A **mutagen** is a substance that causes mutations. A **mutation** is a change in the genetic material in a body cell. Mutations can lead to birth defects, miscarriages, or cancer.

DEFINITIONS:

NAERG is the North American Emergency Response Guidebook. It was jointly developed by Transport Canada, the United States Department of Transportation and the Secretariat of Communications and Transportation of Mexico. It is a guide for first responders to quickly identify the specific or generic hazards of material involved in a transportation incident, and to protect themselves and the general public during the initial response phase of the incident.

NCI is the National Cancer Institute, a federal agency that determines the cancer-causing potential of chemicals.

NFPA is the National Fire Protection Association. It classifies substances according to their fire and explosion hazard.

NIOSH is the National Institute for Occupational Safety and Health. It tests equipment, evaluates and approves respirators, conducts studies of workplace hazards, and proposes standards to OSHA.

NTP is the National Toxicology Program which tests chemicals and reviews evidence for cancer.

OSHA is the Occupational Safety and Health Administration, which adopts and enforces health and safety standards in private workplaces.

PEOSHA is the Public Employees Occupational Safety and Health Act, a state law which sets PELs for New Jersey public employees.

ppm means parts of a substance per million parts of air. It is a measure of concentration by volume in air.

A **reactive** substance is a solid, liquid or gas that releases energy suddenly under certain conditions.

A **teratogen** is a substance that causes birth defects by damaging the fetus.

TLV is the Threshold Limit Value, the workplace exposure limit recommended by ACGIH.

The **vapor pressure** is a measure of how readily a liquid or a solid mixes with air at its surface. A higher vapor pressure indicates a higher concentration of the substance in air and therefore increases the likelihood of breathing it in.



EMERGENCY INFORMATION



Common Name: }
DOT Number: } same as front page
CAS Number: }
NAERG Code: This number is found in the Emergency Response Guidebook which categorizes DOT numbers into groups of chemicals having similar fire and explosion hazards. The guide highlights specific actions that need to be taken by emergency responders during the initial phase of an emergency situation.

Hazard Rating	NJ DHSS	NFPA
FLAMMABILITY	–	1
REACTIVITY	–	1

This box contains hazard ratings (from 0 to 4) assigned by the New Jersey Department of Health and Senior Services or the National Fire Protection Association. It also states important fire and safety information about the substance, i.e., whether it produces poisonous gases.

FIRE HAZARDS:

This section includes important information for anyone who is responsible for firefighting activities. This section does not provide evacuation information.

SPILLS AND EMERGENCIES:

This section lists the steps to be taken in the case of a spill or leak. Disposal of the substance as a hazardous waste is also discussed.

HANDLING AND STORAGE:

This section lists safe practices that should be used when handling and storing the hazardous substance. Other substances which are not compatible with this chemical and should be avoided are listed.

FIRST AID:

This section lists first aid for:

Eye Contact
Skin Contact
Breathing

The New Jersey Poison Information number - 1-800-222-1222 is also listed.

PHYSICAL DATA:

When applicable, this section lists vapor pressure, flash point, and water solubility.

OTHER COMMONLY USED NAMES:

This section includes the scientific chemical name of the substance, and other names (called synonyms) that are commonly used for this substance. If you have any questions about identifying a chemical by its name, call the NJDHSS RTK Infoline at (609) 984-2202.

NEW JERSEY DEPARTMENT OF HEALTH
AND SENIOR SERVICES
Right to Know Program
PO Box 368
Trenton, NJ 08625-0368
(609) 984-2202

Internet

The Right to Know Program periodically posts new and revised Hazardous Substance Fact Sheets on the New Jersey Department of Health and Senior Services' Internet Web site. Over a thousand Fact Sheets are currently available for download from the Department's Web site. The file size for each document is approximately 38 KB. Many Fact Sheets are also available in Spanish.

The Fact Sheets are in Adobe Acrobat PDF (Portable Document Format). This format preserves the layout and graphics of each Fact Sheet and looks just like the printed document. To view a PDF file, one needs the Adobe Acrobat Reader which is available for free from the Adobe Web site at www.adobe.com.

Cost: There is no hourly charge or subscription fee.

To Access: www.nj.gov/health/eoh/rtkweb/rtkhsfs.htm